

WHAT IS CLAIMED IS:

1. An array-based hybridization assay comprising the steps of:  
contacting an array(s) with a test set of target nucleic acids and a control set of target nucleic acids, wherein said control pool of target nucleic acids comprises at least 20 distinct target nucleic acids, wherein each of said at least 20 distinct target nucleic acids is of known sequence and is present in known amount; and  
detecting hybridization patterns of said test and control sets of target nucleic acids to said array(s).
2. The assay according to Claim 1, wherein at least a subset of the probe nucleic acids present on said array are represented in said control set of target nucleic acids.
3. The assay according to Claim 2, wherein all of said probe nucleic acids present on said array are represented in said control set of target nucleic acids.
4. The assay according to Claim 1, wherein said test set of target nucleic acids is labeled with the same label as said control set of target nucleic acids.
5. The assay according to Claim 1, wherein said test set of target nucleic acids is labeled with a different label from said control set of target nucleic acids.
6. The assay according to Claim 1, wherein said test and control sets of target nucleic acids are contacted with the same array.
7. The assay according to Claim 1, wherein said test and control sets of target nucleic acids are contacted with first and second arrays, respectively, wherein each of said first and second arrays display the same probe nucleic acids.

8. The assay according to Claim 5, wherein said test and control sets of target nucleic acids are contacted with the same array.

9. The assay according to Claim 8, wherein said assay further comprises generating said control set of target nucleic acids.

10. The assay method according to Claim 1, wherein said assay further comprises generating said test set of target nucleic acids.

11. The assay method according to Claim 10, wherein said test set generation comprises:

- contacting an initial nucleic acid sample with a control set of target nucleic acids under conditions sufficient to produce duplex structures made up of complementary sample initial nucleic acids hybridized to control target nucleic acids of said control set;
- isolating said resultant duplex structures; and
- recovering control target nucleic acid components of said duplex structures to produce said test set of target nucleic acids.

12. The assay according to Claim 1, wherein said control set of target nucleic acids comprises at least 50 distinct target nucleic acids.

13. The method according to Claim 1, wherein said method further comprises comparing said test and control hybridization patterns.

14. The assay according to Claim 1, wherein said test target nucleic acids and said control target nucleic acids are contacted to said array simultaneously.

15. The assay according to Claim 1, wherein said test target nucleic acids and said control target nucleic acids are contacted to said array sequentially.

16. The assay according to Claim 1, wherein said assay further comprises calculating individual test target nucleic acid concentrations present in said set of test target nucleic acids.

17. A set of control target nucleic acids for use in hybridization to an array of probe nucleic acids corresponding to a plurality of different genes, wherein said control set comprises at least 20 distinct target nucleic acids, wherein each of said distinct target nucleic acids of said control set is of known sequence and is present in known amount, and at least a subset of said probe nucleic acids on said array is represented in said control set of target nucleic acids.

18. The set of control target nucleic acids according to Claim 17, wherein said control target nucleic acids are selected from the group consisting of: ribonucleic acids and deoxyribonucleic acids.

19. The set of control target nucleic acids according to Claim 17, wherein each of said probe nucleic acids on said array is represented in said control set of target nucleic acids.

20. A kit for use in an array based hybridization assay, said kit comprising:  
(a) an array of probe nucleic acids corresponding to a plurality of different genes; and  
(b) a control set of target nucleic acids wherein said control set of target nucleic acids comprises at least 20 distinct target nucleic acids, wherein each of said distinct target nucleic acids of said control set is of known sequence and is present in known amount, and at least a subset of said probe nucleic acids on said array is represented in said control set of target nucleic acids.

21. The kit according to Claim 20, wherein said nucleic acids are ribonucleic acids.
22. The kit according to Claim 20, wherein said kit further comprises primers.
23. The kit according to Claim 22, wherein said primers are gene specific primers.
24. The kit according to Claim 20, wherein said kit further comprises a label.
25. The kit according to Claim 20, wherein each of said probe nucleic acids on said array is represented in said control set of target nucleic acids.